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DIVISION ACTIVITIES

SANITARY ENGINEERING DIVISION

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NEWS

October, 1957

The Sanitary Engineering Division Journal affords the sanitary engineering profession a means of communication not available elsewhere. It is an engineer's voice, created and supported by the Society for the sole purpose of developing the science and practice of sanitary engineering.

The Journal's two sections provide for two closely related, but independent channels of expression. The importance of the section devoted to technical papers is quite generally appreciated by members of the Sanitary Engineering Division. It is not believed, however, that there is any commensurate appreciation of the role which the Division Affairs section can play in the dissemination of information relative to sanitary engineering.

There is no existing medium in sanitary engineering literature which successfully reports on a national basis the tremendous area of sanitary engineering interest not ammendable to reporting by technical papers. The Division Affairs section does offer a potential medium for such reporting, but this potential has been only partially realized because of the fragmentary reporting of required news items to the Division Affairs section staff by members of the Sanitary Engineering Division.

If you are interested in keeping well informed on:

* Sanitary Engineering Research
* New Developments in Water Supply and Waste Disposal
* Sanitary Engineering Aspects of Nuclear Energy
* Advances in Air Pollution Control
* Trends in Water Pollution Control
* Water Resources Problems
* Graduate Study Programs
* Legislation Affecting Sanitary Engineers
* Division Affairs
* Expressions of Opinion of Your Fellow Sanitary Engineers,

you are invited to participate in making the Division Affairs section an important source of Sanitary Engineering News.

You can participate by extending your understanding and moral support to this endeavor, and most importantly, by regularly contributing informational material to the Assistant Editor located nearest to you. Without this material no amount of effort expended by the Division Affairs section staff can accomplish anything worthwhile.

Note: No. 1957-19 is part of the copyrighted Journal of the Sanitary Engineering Division of the American Society of Civil Engineers, Vol. 83, SA 5, October, 1957.

You are not asked to write the articles or news items, but merely to submit the informational material from which the articles or news items can be prepared. Signed articles of a nature which could logically appear in the Division Affairs section and letters to the editor are also invited.

If you feel that you will benefit from a comprehensive national reporting of sanitary engineering news you are asked to actively participate in the manner indicated. It's up to you!

David H. Howells

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In questions of science the authority of a thousand is not worth the humble reasoning of a single individual.

- Galileo Galilei

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SANITARY ENGINEERING RESEARCH

RESEARCH GRANTS AND CONTRACTS

One-hundred and forty-three research grants in sanitary engineering totaling $1,989,438, were supported by the Public Health Service in fiscal year 1957. The support for research grants during this period represents a 126% increase over that of the previous year.

The fiscal year 1957 grants are summarized as follows:

	Number	Amount
Community Air Pollution Control	37	$ 873,723
Water Supply and Water Pollution Control	81	756,793
General Engineering and Milk and Food	15	202,931
Occupational Health	10	155,991
	143	$1,989,438

Two of the water supply and water pollution control research grants are of particular interest to sanitary engineers concerned with evaluating the economic impact of water pollution. Both grants were made in support of the development of methods for measuring the costs of water pollution to the individual and to the community. One, for $38,368, was made to the University of Chicago for studies related to industrial and agricultural water uses. The other, in the amount of $39,560, was made to Stanford University and is concerned with municipal and recreational water uses.

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WATER POLLUTION CONTROL

SALT POLLUTION IN THE OHIO RIVER

The Ohio River Valley Water Sanitation Commission invited some 150

members of its industry-advisory committees to its quarterly meeting in Cincinnati on July 10 to exchange viewpoints on the regulation of salt discharges. "We are concerned," said Chairman Poole, "over the fact that at times of low flow in the upper stretches of the Ohio River we detect abnormal amounts of salt. Although the quantities observed do not represent any hazard to public health, they do constitute what might result in an unjustified impairment of water quality for industrial purposes. Salt in water is one of the factors that hastens corrosion of metal piping and structures, as well as interferes with the generation of steam. We propose to initiate preventive measures before a serious problem can occur."

The Commission maintains water quality monitor stations at various points along the Ohio River and its tributaries. Records compiled each week for the past several years were examined at the meeting. These showed the fluctuations in salt content and the portions of the river affected. Departures from the normal salt concentration are attributable to waste effluents from industries, notably those that process brine and oil resources.

OHIO RIVER VALLEY STATES LAUDED BY PRESIDENT EISENHOWER

On August 23, 1957, President Eisenhower lauded the people of the Ohio Valley and the eight states represented by the Ohio River Valley Water Sanitation Commission for their display of local initiative in curbing stream pollution on a cooperative regional basis.

In a telegram addressed to B. A. Poole, chairman of the Commission, Mr. Eisenhower said:

> "To the members and staff of the Ohio River Valley Water Sanitation Commission, I send greetings. It is encouraging to learn of the progress your Commission has made in alerting the people of the Ohio Valley to their continuing responsibility in water pollution control. The leadership of your Commission in cooperation with the eight valley states has contributed substantially in securing remedial measures through local initiative. As you begin the tenth year of work in this vital area of water resources I wish you continuing success."

President Eisenhower's telegram follows announcement by the Commission that the ninth year progress report, compiled as of July 1, 1957 shows:

1. More than three-quarters of the 10,000,000 sewered population of the Ohio Valley is served by purification facilities already in operation or to be placed in operation as fast as construction can be completed; and

2. One-half of the 1,432 industrial plants discharging effluents directly into streams now are operating control facilities that adequately curb pollution; and two-thirds of the industries already have complied at least with minimum requirements established by the Commission.

GROUND GARBAGE AND SEWAGE DISPOSAL

The 7th Annual Report of Sewage Disposal in Cincinnati, Ohio, disclosed that increased use of garbage grinders within the Cincinnati Metropolitan Sewage Disposal Service Area has directed the attention of the Industrial Waste Control-Revenue Engineering Unit to existing and future problems that can be the result of these installations.

Studies were initiated during 1956 relative to increased contributions of suspended solids, BOD, and ether soluble matter to the Metropolitan sewer system as the result of installations of garbage grinders or disposals. Gaging, sampling and analytical operations were performed on the subdivisions where 100% installations had been made to determine the average domestic contributions. Comparison has been made against analytical results of operations in residential areas with relatively few or no installations of garbage grinders or disposals. The results obtained are as follows:

RESIDENTIAL COMPARATIVE ANALYSIS

TYPE OF AREA	UNIT	B.O.D.	SUSP. SOLIDS	ETHER SOLUBLE
Residential Area; 100% installation of garbage grinders; Population 1164.	ppm.	442	375	231
	pounds	253	215	132
	pounds/cap/day	0.217	0.169	0.113
	% Volatile		91	
Residential Area; Few or no installations of garbage grinders; population 1200.	ppm.	138	175	49
	pounds	130	160	46
	pounds/cap/day	0.11	0.14	0.038
	% Volatile		76	

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In the space of one hundred and seventy-six years the Lower Mississippi has shortened itself two hundred and forty-two miles. That is an average of a trifle over one mile and a third per year. Therefore, any calm person, who is not blind or idiotic, can see that in the old Oölitic Silurian Period, just a million years ago next November, the Lower Mississippi River was upward of one million three hundred thousand miles long, and stuck out over the Gulf of Mexico like a fishing-rod. And by the same token any person can see that seven hundred and forty-two years from now the Lower Mississippi will be only a mile and three-quarters long, and Cairo and New Orleans will have joined their streets together, and be plodding along under a single mayor and a mutual board of aldermen. There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact.

- Mark Twain (Life on the Mississippi)

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GRADUATE STUDY PROGRAMS

A NEW GRADUATE PROGRAM IN AIR POLLUTION CONTROL

The University of Pittsburgh Graduate School of Public Health has recently announced a new graduate study program in various aspects of air pollution and related subjects leading to the degree, Master of Science in Hygiene. This program will start in September, 1957, and continue through

August, 1958. It was initiated in response to an increasing demand from governmental agencies and industry for engineers equipped to meet and deal with the growing problems of air pollution.

The curriculum is based on the conviction that the student should acquire as a foundation a good understanding of the basic physical and social relationships between man and his environment as well as instruction in principles pertaining specifically to air pollution.

A number of existing courses in the Graduate School of Public Health embrace elements of knowledge of considerable importance to the student aspiring to an administrative position in the field of air pollution. The background courses are as follows:

Principles of Statistical Reasoning and Principles of Epidemiology
Principles of Public Health Practice
Man and the Environment
Environmental Physiology and Industrial Hygiene
Industrial Toxicology and Health Physics
Air Pollution Laboratory and Seminar
Community Atmosphere Air Pollution Measurements
Source Emission Measurements

A lecture and seminar course covering the air pollution field broadly will include as topics:

Health Aspects of Air Pollution
Nuisance Aspects of Air Pollution
Causes, Sources, and Characteristic Emission Rates
Meteorological Influences
Rate of Dispersion from a Source

From the end of the spring semester through August, the student will be required to complete a research problem as part of the requirements for the degree.

The foregoing program is engineer-oriented and applicants will be required to have an engineering degree and adequate training in chemistry. Preference will be given those applicants who have had some years of experience in engineering.

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AIR POLLUTION CONTROL

NATIONAL ADVISORY COMMITTEE ON COMMUNITY AIR POLLUTION

The first meeting of the National Advisory Committee on Community Air Pollution was held on June 17, 1957. The Committee was organized to review the objectives, policies, and accomplishments of the program established by the Public Health Service under the Air Pollution Research and Technical Assistance Act of 1955. The meeting, chaired by Surgeon General Burney, was held for orientation of the members and a preliminary general discussion on broad program policies. The Committee members are: Dr. James P. Dixon, Health Commissioner of Philadelphia; Mr. Peter N. Gammelgard, Vice President, Pure Oil Co., Chicago; Mr. Smith Griswold, Director of the Los Angeles County Air Pollution Control District; Mr. Benjamin Linsky,

Air Pollution Control Officer, Area Air Pollution Control District, San Francisco; Mr. Edward C. Logelin, Vice President, U. S. Steel Co., Chicago; Dr. Louis C. McCabe, President, Resources Research, Inc., Washington, D. C.; Dr. Malcolm H. Merrill, Director, California State Department of Public Health; Dr. Norton Nelson, Assoc. Professor of Industrial Medicine, New York University; Dr. Leslie Silverman, Harvard University School of Public Health; Dr. Irving R. Tabershaw, Assoc. Professor of Occupational Medicine, Columbia University; Mr. Robert R. Balmer, E. I. Dupont de Nemours and Co., Newark, Delaware; and Mr. Charles W. Gruber, Air Pollution Control and Heating Engineer, Bureau of Air Pollution Control and Heating Inspection, Cincinnati, Ohio.

STATE LEGISLATION

California - Enacted five laws during 1957 which amend or add sections to the air pollution provisions of the Health and Safety Code.

Delaware - Enacted legislation creating an air pollution authority administered by the State Board of Health. The authority is given to develop a comprehensive program for the prevention and control of air pollution, in addition to research and technical assistance activities.

Florida - Enacted legislation creating an air pollution control commission in the State Board of Health. The commission is authorized to create air control districts in accordance with a prescribed procedure. The State Board of Health acting for the commission has a statewide research and technical assistance responsibility and additional specific functions and powers in air control districts.

Hawaii - Territorial Board of Health is authorized to formulate and promulgate rules and regulations controlling and prohibiting air pollution throughout the Territory or such parts thereof as may be affected. A section on air pollution control is established and a program of research and air pollution control education in addition to control activities is authorized.

Minnesota - Enacted legislation which authorized the State Board of Health to make regulations relating to atmospheric pollution control. These regulations have the force of law except where they conflict with a statute, or with the charter or ordinance of a city of the first class upon the same subject. The regulatory authority is restricted to atmospheric pollution which may be injurious or detrimental to public health.

Nevada - Enacted legislation enabling the boards of county commissioners, and the governing bodies of incorporated cities to regulate, control and prohibit by ordinance the excessive emissions of dense smoke and air pollution by soot, cinders, fly ash, dust, noxious acids, fumes and gases. It also permits entering into cooperative agreements between the counties and cities for these purposes in terms of joint usage of personnel, equipment and facilities.

New Jersey - Enacted legislation relating to the study of smoke and air pollution by the Interstate Sanitation Commission, and extending the period of the final report to February 1, 1958.

New York - Enacted legislation amending the Public Health Law and creating an air pollution control board in the State Department of Health. A policy has also been established that rules, regulations or codes established under this law should be clearly premised upon scientific knowledge of causes as well as effects. The law prevents the promulgation of codes, rules and regulations and their enforcement for a period of 2 years from the effective

date of the act. Another New York act relates to the study of smoke and air pollution by the Interstate Sanitation Commission. It requires a report by March 31, 1958, presenting findings and recommendations for a smoke and air pollution control program. It also requires a study and evaluation of existing laws in the States of New York, New Jersey, and Connecticut and a draft of proposed legislation.

Ohio - Enacted legislation which relates to the activities of the State Department of Health. These activities are principally that of research, technical assistance, maintenance of a laboratory, and dissemination of information.

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NUCLEAR SCIENCE AND ENGINEERING

FOURTH NUCLEAR CONGRESS TO BE HELD IN CHICAGO

Planning for the Nuclear Engineering and Science Conference of the 4th Nuclear Congress to be held in Chicago in mid-March of 1958 is now well underway.

Tentative programming has included a major section on Plant Location and Safeguards which will be of considerable interest to sanitary engineers working in this or related fields. The program includes:

Handling and Storage of Radioactive Materials
Plant Design Evaluation
Availability and Contamination of Water Supply
Waste Disposal
Atmospheric Control
Site Evaluation

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DID YOU KNOW THAT

A poll of students by The Purdue Opinion Panel in 1956 disclosed that:

14% of the students think there is something evil about scientists
30% believe that one can't raise a normal family and become a scientist
45% think their school background is too poor to permit them to choose science as a career.
9% believe that one can't be a scientist and be honest
25% think scientists as a group are more than a little bit "odd."
28% don't believe scientists have time to enjoy life
35% believe that it is necessary to be a genius to become a good scientist
27% think that scientists are willing to sacrifice the welfare of others to further their own interests.

- American Scientist, March, 1957

Edward F. Eldridge, former Chief Engineer and Director of the Washington Pollution Control Commission, is now Special Research Assistant for the Public Health Service with headquarters in Portland, Oregon. His work is

concerned with promoting and coordinating research in the Pacific Northwest.

Blucher A. Poole, a former Chairman of the Sanitary Engineering Division, took office on July 10, 1957, as chairman of the Ohio River Valley Water Sanitation Commission. One of the nation's outstanding sanitary-engineer administrators, he brings to this new post the background acquired during 26 years of experience with the Indiana State Health Department and a host of public service commissions and boards concerned with water resources management. Most recently he acted as expert advisor in sanitary engineering to the U. S. Delegation at the 1957 World Health Organization meeting in Geneva.

Jesse V. Lunsford will teach sanitary engineering at Rensselaer Polytechnic Institute during the coming academic year. He has been serving as Assistant Professor of Civil Engineering and Assistant Sanitary Engineer, Division of Industrial Research, State College of Washington.

Herbert C. Clare, Sanitary Engineer in Charge, Pacific Northwest Office, Public Health Service, was elected Chairman of the Columbia Basin Inter-Agency Committee at the Ninety-second meeting of the Committee on June 12. Mr. Clare succeeds Brigadier General L. N. Foote, Division Engineer, Corps of Engineers, Portland, Oregon, as Chairman, and will represent the Department of Health, Education and Welfare on the Columbia Basin Inter Agency Committee.

The Pacific Northwest Sewage and Industrial Wastes Association will hold its annual meeting in Seattle, October 24-26. Professor Robert O. Sylvester, University of Washington, is chairman of the program committee, while Wilson Bow of the State Health Department is heading up local arrangements.

Thomas de S. Furman, Professor of Civil Engineering, University of Florida, and John B. Powers of the S. W. Dickey Clay Mfg. Co. in Texarkana, Texas, have agreed to serve as Assistant Editors for the Journal.

Edward L. Ruppert, head of the Environmental Sanitation Section in the Division of Engineering and Sanitation, Washington State Department of Health, has resigned to accept a position with the U. S. Public Health Service.

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Please cooperate by sending sanitary engineering news items to:

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